What is claimed is:

1. The use of molecules that are taken up by the cell, which molecules comprise a tumor seeking biomolecule coupled to an intercalating moiety, which is complexed to a metal, which metal is preferably a radioactive metal, for the preparation of a therapeutic composition for the treatment and diagnosis of tumors and malignancies.

2. The use as claimed in claim 1 wherein the biomolecule is selected from the group consisting of somatostatin-, neurotensin-, bombesin-receptor binding molecules, antibodies, penetratines™, and molecules binding to the GPIIb/IIIa receptors.

3. The use as claimed in claims 1 or 2 wherein the intercalating agent is an aromatic molecule with an intercalative binding affinity for double-stranded DNA.

4. The use as claimed in claim 3, wherein the intercalating agent is selected from the group consisting of acridine, porphyrin, ellipticine, phenantroline, carbazole, benzimidazole or compounds with known cytostatic activity (antibiotics) from the class of tetracyclines (anthracyclines), such as daunorubicine, epirubicine or mixoxantrone.

5. The use as claimed in claims 1 or 2, wherein the radioactive metal is a γ-emitting nuclide.

6. The use as claimed in claim 3, wherein the radioactive metal is a γ-emitting nuclide.

7. The use as claimed in claim 4, wherein the radioactive metal is a γ-emitting nuclide.

8. The use as claimed in claim 5, wherein the radioactive metal is selected from the group consisting of Tc-99m, Re-186, Re-188 and Mn.

9. The use as claimed in claim 1, wherein the molecule has the general structural formula as given in Fig. 2.

10. The use as claimed in claim 1, wherein the molecule has any one of the structures as shown in Fig. 1.

11. The use of molecules as claimed in claim 1 for the preparation of a therapeutic or diagnostic agent for treating or diagnosing cancer tumors or malignancies.

12. A therapeutic composition, comprising one or more molecules as claimed in claim 1 and one or more suitable excipients.

13. A diagnostic composition, comprising one or more molecules as claimed in claim 1 in a suitable carrier.

14. A compound comprising

(a) a biomolecule molecule selected from somatostatin, neurotensin, bombesin-receptor binding molecules, antibodies, penetratines™, and molecules binding to GPIIb/IIIa receptors;

coupled to

(b) an aromatic intercalating moiety with binding affinity for double-stranded DNA selected from acridine, porphyrin, ellipticine, phenantroline, carbazole, benzimidazole, and tetracycline compounds with cytostatic activity;

which is complexed to

(c) a γ-emitting radioactive metal selected from Tc-99m, Re-186, Re-188, and Mn.

15. The use of the compound of claim 14 to diagnose a tumor.

16. The use of the compound of claim 14 to treat a tumor.

17. A kit for the preparation of a diagnostic or therapeutic composition comprising

(a) a biomolecule molecule selected from somatostatin, neurotensin, bombesin-receptor binding molecules, antibodies, penetratines™, and molecules binding to GPIIb/IIIa receptors;

coupled to

(b) an aromatic intercalating moiety with binding affinity for double-stranded DNA selected from acridine, porphyrin, ellipticine, phenantroline, carbazole, benzimidazole, and tetracycline compounds with cytostatic activity; and

(c) instructions to combine the above composition with a γ-emitting radioactive metal selected from Tc-99m, Re-186, Re-188, and Mn.

18. The kit of claim 17 additionally including one or more pharmaceutically acceptable excipients.

ART 34 AMDT

Enclosure to letter dated 10 April 2001
International application No. PCT/EP00/01553

NEW CLAIMS

1. Use of molecules that are taken up by the cell, which molecules comprise a tumor seeking biomolecule coupled to an intercalating moiety, which is complexed to a metal, which metal is preferably a radioactive metal, for the preparation of a therapeutical composition for the treatment and diagnosis of tumors and malignancies.

2. Use as claimed in claim 1 wherein the biomolecule is selected from the group consisting of somatostatin-, neurotensin-, bombesin-receptor binding molecules, antibodies, penetratines™, and molecules binding to the GPIIb/IIIa receptors.

3. Use as claimed in claims 1 and 2 wherein the intercalating agent is an aromatic molecule with an intercalative binding affinity for double-stranded DNA.

4. Use as claimed in claim 3, wherein the intercalating agent is selected from the group consisting of acridine, porphyrin, ellipticine, phenantroline, carbazole, benzimidazole or compounds with known cytostatic activity (antibiotics) from the class of tetracyclines (anthracyclines), such as daunorubicine, epirubicine or mixoxantrone.

5. Use as claimed in claims 1-4, wherein the radioactive metal is a γ-emitting nuclide.

6. Use as claimed in claim 5, wherein the radioactive metal is selected from the group consisting of Tc-99m, Re-186, Re-188 and Mn.

7. Use as claimed in claims 1-6, wherein the molecule has the general structural formula as given in Fig. 2.

8. Use as claimed in claims 1-7, wherein the molecule has any one of the structures as shown in Fig. 1.

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